

CLAIMS

1. A magnetic recording apparatus comprising:

a disk-shaped information recording medium on which periodic physical changes providing changes of reflectivity are formed;

a light source which outputs a light beam;

a diffraction element which receives the beam outputted from the light source and generates three beams;

a light-converging optical system which converges the beams generated by the diffraction element on the information recording medium as a microspot;

a photodetection means having three photosensitive parts which receive beams reflected and diffracted by the information recording medium and again transmitted in the aperture of the light-converging optical system, and which output signals in accordance with the quantities of received light beams, respectively;

a signal processing means which processes the signals outputted from the photodetection means to output a tracking error signal;

a driving means which receives the tracking error signal outputted from the signal processing means, and determines a position of the beam on a desired track;

a magnetic head which records information on the

information recording medium, or reproduces or deletes information from the information recording medium;

wherein the signal processing means includes a cancel means which cancels crosstalk that occurs between the signals outputted from three photosensitive parts of the photodetection means.

2. The magnetic recording apparatus of Claim 1 wherein the signal processing means cancels crosstalk which occurs between signals by the cancel means, and detects a tracking error signal with reduced error.

3. The magnetic recording apparatus of Claim 1 wherein the cancel means cancels crosstalk from at least one signal among the three signals outputted from the photodetection means to the other signal.

4. The magnetic recording apparatus of Claim 1 wherein the cancel means comprises:  
first and second voltage-dividing means which perform voltage division on an output signal from a first photosensitive part of the photodetection means;  
a first differential arithmetic means which performs differential calculation on an output signal from a second photosensitive part of the photodetection means and an output

signal from the first voltage-dividing means:

a second differential arithmetic means which performs differential calculation on an output signal from a third photosensitive part of the photodetection means and an output signal from the second voltage-dividing means.

5. The magnetic recording apparatus of Claim 4 wherein the first and second voltage-dividing means have voltage-dividing ratios approximately equal to the ratio at which the output signal from the first photosensitive part crosstalks to the output signals from the second and third photosensitive parts.

6. The magnetic recording apparatus of Claim 4 wherein the first and second voltage-dividing means comprise resistors.